

REMARKS

In the parent case, U.S. application serial no. 10/770,734 (herein the '734 application), the examiner conceded that claims 25-35 and 39-52 were allowed, but that claims 1-7, 10 and 12-24 were rejected. To obtain issuance of the allowed subject matter in the parent case (the '734 application), applicants canceled the rejected claims. Accordingly, the instant application is filed herewith to pursue the claims canceled (i.e., 1-7, 10 and 12-24) in the '734 application.

Claims 1-7, 10 and 12-24 are identical to claims 1-7, 10 and 12-24 in the amendment filed on February 14, 2008 in the parent application (the '734 application), except that the further limitation "on the carbon skeleton" has been added to claims 1 and 12. Support for the limitation "on the carbon skeleton" can be found in the specification as originally filed, see *inter alia*, paragraph [0095].

In order to facilitate prosecution of claims 1-7, 10 and 12-24 in the instant application, applicants below address the rejections raised by the examiner in the office action dated March 8, 2008 in the '734 application.

Rejection under 35 U.S.C. 103(a) over U.S. Patent No. 5,902,562 to Lagasse et al.

Claims 1-5 and 10 were rejected under 35 U.S.C. 103(a) for allegedly being obvious over U.S. Patent No. 5,902,562 to Lagasse et al. The office action states that Lagasse teaches, especially in figs. 1 and 3, what appears to be the claimed invention. The examiner acknowledges that Lagasse et al. does not teach the distribution. However, the examiner contends that uniform pore size is an obvious expedient.

Applicants respectfully disagree. Lagasse et al. discloses a composition having a microstructure having interconnected 1 μ m pores (macropores) that provide facile access to the interior and provide high permeability. Lagasse et al. further teaches that the walls

of the 1 μ m pores consist of interconnected flakes. According to Lagasse et al., it is the walls of these interconnected flakes that contain nanometer size pores (microporosity). See column 3, lines 27-32 and column 56-60. Therefore, Lagasse et al. discloses that the nanometer size pores are on the interconnected flakes. Accordingly, there is no disclosure or suggestion in Lagasse et al. that nanometer size pores are present on the carbon skeleton, as is required in the claimed invention. Accordingly, the claimed invention cannot be said to be obvious over Lagasse.

Therefore, applicants respectfully request that the rejection of claims 1-5 and 10 under 35 U.S.C. 103(a) over Lagasse be reconsidered and withdrawn.

Rejection under 35 U.S.C. 103(a) over U.S. Patent No. 6,024,899 to Peng et al.

Claims 1-7 and 10 were rejected under 35 U.S.C. 103(a) for allegedly being obvious over U.S. Patent No. 6,024,899 to Peng et al. The office action states that Peng et al. teaches mesoporous carbon made using porogens. The examiner acknowledges that micropores are not described. However, the examiner contends that macropores account for the remaining pore volume. The examiner further contends that forming uniform pores is an obvious expedient of Peng et al. because the reference teaches optimization of porosity.

Applicants respectfully disagree. The claimed invention is directed to a carbon monolith having essentially uniform sized macropores and mesopores on the carbon skeleton.

In stark contrast to the claimed invention, Peng et al. does not disclose or suggest a carbon monolith. The composition disclosed in Peng et al. is directed to a substrate containing a carbon coating (see column 6, line 55 et seq.). According to Peng et al., the composition contains (see column 7, lines 1-3):

... **carbon** in an amount **less than and up to about 50%**
often less than and up to about 30% of the total weight of
the substrate and carbon. (*Emphasis added*)

Thus, the composition of Peng et al. is not a carbon monolith having essentially uniform sized macropores and mesopores on the carbon skeleton, as is required in the claimed invention. Accordingly, the claimed invention cannot be said to be obvious over Peng et al. Therefore, applicants respectfully request that the rejection of claims 1-7 and 10 under 35 U.S.C. 103(a) over Peng et al. be reconsidered and withdrawn.

Rejection under 35 U.S.C. 102(b)/103(a) over U.S. Patent No. 6,515,845 to Oh et al.

Claims 1-7 and 10 were rejected under 35 U.S.C. 102(b) for allegedly being anticipated by, or in the alternative, under 35 U.S.C. 103(a) for allegedly being obvious over U.S. Patent No. 6,515,845 to Oh et al. The office action states that Oh et al. teaches a very similar process and makes what appears to be the claimed carbon. The examiner points to the figures in Oh et al. The examiner further states that Oh et al. teaches optimization of pore size. Therefore, the examiner concludes that the uniform pores is an obvious expedient.

Applicants respectfully disagree. Oh et al. discloses a nanoporous carbon material having 2 to 20 nm pore size. See column 3, lines 10-19 and column 6, lines 17-19. There is, however, no disclosure or suggestion in Oh et al. of a carbon material having essentially uniform sized macropores and mesopores on the carbon skeleton having a size of at least 100 nm.

In contrast to Oh et al., the invention is directed to a robust carbon monolith having a skeleton size of at least 100 nm and essentially uniform sized macropores and mesopores on the carbon skeleton having a size of at least 100 nm.

The examiner states in his rejection that Oh et al. teaches optimization of pore size. Therefore, the examiner concludes that the uniform pores is an obvious expedient. Applicants respectfully disagree that the uniform pore sizes claimed is an obvious expedient of Oh et al. for at least the following reason.

As stated above, Oh et al. teaches a nanoporous carbon material having 2 to 20 nm pore size. Therefore, at most, Oh et al. teaches optimization of pores having 2 to 20 nm pore size. However, Oh et al. does not teach a carbon monolith having both essentially uniform sized macropores and essentially uniform sized mesopores, nor does Oh et al. provide any motivation to do so.

Accordingly, the claimed invention cannot be said to be anticipated or obvious over Oh et al. Therefore, applicants respectfully request that the rejection of claims 1-10 under 35 U.S.C. 102(b)/103(a) over Oh et al. be reconsidered and withdrawn.

Rejection under 35 U.S.C. 103(a) over the References Above, individually, and taken with Taguchi et al.

Claims 12-24 were rejected under 35 U.S.C. 103(a) for allegedly being obvious over the references above, individually, and taken with Taguchi et al. Applicants have already addressed the rejection of the carbon monolith of the present invention over the references above. The disclosure of Taguchi et al. does not rectify the deficiencies in the above references.

Accordingly, application respectfully request that the rejection of claims 12-24 be reconsidered and withdrawn.

Support for Amendments to the Specification

Applicants have amended the specification in order to insert priority claims.

Applicants have also corrected the typographical error on paragraphs [0027] to [0032] on page 5 of the specification by replacing the term “mesopores” with the word “macropores.” The figure legends are now consistent with the definition of macropores provided in paragraph [0039] on page 6 of the specification as originally filed. No new matter has been added.

In view of the above amendments and remarks, allowance of the pending claims is earnestly requested. If the examiner has any questions or concerns regarding this amendment, he is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

/Edna I. Gergel/

Edna I. Gergel, Ph.D.
Registration No. 50,819
Agent for Applicants

UT-Battelle, LLC
P.O. Box 2008
Oak Ridge, TN 37831-6258
Tel. 865-574-0393
Fax 865-5740381